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ABSTRACT

Trait psychology, psycho-dynamics, situationism, and interactionism, the four basic models of personality, are summarized; controversies they have generated and relevant research are discussed. Special emphasis is placed on interactional psychology as a model of personality theory and research. Controversial issues of personality such as consistency versus specificity, persons versus situations, mediating versus reaction variables, and mechanistic versus dynamic interaction are presented. The role of situations in personality research and theory is identified. The interaction model of anxiety, a special case of the interaction model of personality, is described and empirical support for this model is discussed. Potential applications of the interaction model of anxiety are presented. Specifically this model is discussed with respect to possible applications for psychotherapy, academic achievement, surgery, and athletics. The limitations of interactionism are presented and directions for future research are described. (Author/RW)

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APPLICATIONS OF THE INTERACTION MODEL OF PERSONALITY TO REAL LIFE SITUATIONS

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APPLICATIONS OF THE INTERACTION MODEL OF PERSONALITY TO REAL LIFE SITUATIONS*

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Trait psychology, psychodynamics, situationism, and interactionism, the four basic models of personality, are summarized. Special emphasis is placed on interactional psychology as a model of personality theory and research. Controversial issues of personality such as consistency versus specificity, persons versus situations, mediating versus reaction variables and mechanistic versus dynamic interaction are discussed. The role of situations in personality research and theory are discussed. The interaction model of anxiety, a special case of the interaction model of personality, is described and empirical support for this model is discussed. Potential applications of the interaction model of anxiety are presented. Specifically this model is discussed with respect to possible applications for psychotherapy, academic achievement, surgery, and athletics. The limitations of interactionism are presented and directions for future research are described.

Does personality consist of a constellation of traits? Is it an interrelationship of motives and emotions? Does it emphasize patterns of cognitions or patterns of behaviour? It all depends on the model of personality that one wishes to emphasize. Elsewhere (Endler, 1975a, 1982, 1983; Endler and Magnusson 1976), I have discussed four models of personality that have guided our research and theorizing. Here I wish to summarize these four models, indicate the controversies they have generated and discuss some of the relevant research.

Personality Models

The four personality models that I wish to summarize are: the trait model, psychodynamics, situationism and interactionism. The trait model emphasizes internal factors as the prime determinants of behaviour and postulates that traits are latent and stable dispositions that affect behaviour. Traits, therefore, function as predispositional bases for response-response consistencies of behaviour across various situations (e.g., Cattell, 1957; Guilford, 1959). This model assumes that the rank order of persons for a specified personality variable

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(e.g., anxiety) is the same for various situations. It does not postulate that individuals behave exactly the same way in different situations. Traits are not linked to specific stimuli or responses. The various trait theorists all agree that traits are the basic units of personality, but disagree as to the specific numbers, types, and structures of traits. Modern trait theorists recognize that traits interact with situations in guiding and determining behaviour.

The psychodynamic models, especially psychoanalysis, also focus on internal determinants of behaviour. However, the two models also differ. Psychodynamic models postulate an essential core of personality which instigates behaviour in various situations. Psychoanalysis, for example, describes the structure of personality (id, ego and superego), the dynamics of personality, and the development of personality (Freud, 1959). According to Freud, experiences modify the expression of instinctual impulses. The neo-Freudians (e.g., Horney, 1945; Sullivan 1953; Fromm, 1955; and Erikson, 1963) have minimized the role of psychosexual stages and the role of instincts, and have instead emphasized psychosocial stages of development, the ego and social factors.

Situationism, especially social learning theory, emphasizes external factors as the basic determinants of behaviour. The different social learning models represent a heterogeneous set of viewpoints (see Endler and Edwards, 1978). Classical behaviour theorists, such as Dollard and Miller (1950), study organismic variables such as habits and drives. Modern behaviour theorists (such as Bandura, 1971, 1977b; Mischel, 1973; and Rotter, 1975) are primarily concerned with the person's behaviour rather than with motives, attributes, and traits. Nevertheless, they do include person factors in their theories (e.g., see Bandura, 1977a, on self competence; see Mischel, 1973, on expectancy; and see Rotter, 1975, on locus of control). The modern social learning theorists are concerned with the reciprocal interaction between situations and persons.

The interaction model (Endler, 1983; Endler and Magnusson, 1976; Magnusson and Endler, 1977) emphasizes person by situation interactions and the reciprocal interaction of persons and situations regarding behaviour. There is a continuous interaction between the person and the situations that he or she selects or encounters. As part of the interaction process, situations affect persons who subsequently affect these situations. Behaviour is a function of a continuous multidirectional process of person by situation interactions. The person is an intentional and active agent in this process. Cognitive, motivational, and emotional factors play important determining roles in behaviour. The perception or psychological meaning that the situation has for the individual is an important determining factor of behaviour. Two essential tasks for interactional psychology are: (1) the description, classification, and systematic analyses of stimuli, situations, and environments, and (2) the study of how persons and situations interact in eliciting behaviour, and the reciprocal interaction of persons and behaviour, persons and situations, and situations and behaviour.

Controversial Issues in Personality Research

The four personality models have generated a number of controversies in personality research, which we will briefly summarize. These controversies include personality theories and their measurement models, mediating versus reaction variables, persons versus situations, consistency versus specificity, and mechanistic versus dynamic interaction.

Personality theories and their measurement models. Researchers have often failed to differentiate between personality theories that are models of psychological processes and the measurement models that are pertinent to these theories (Endler, 1977, 1983; Magnusson and Endler, 1977). The trait measurement model assumes a true trait score for each person, and postulates that individual positions on the trait dimension (e.g., anxiety) are stable across various situations. Therefore the test score or response that serves as an index of the trait is also stable across situations. The trait model assumes a positive and monotonic relationship between mediating variables and overt behaviour, but the psychodynamic model does not. Their measurement models are different, although they both emphasize internal factors.

Reaction variables and mediating variables. There are at least four classes of reaction variables, namely overt behaviour, physiological reactions, covert reactions (feelings, etc.) and artificial behaviour (role playing, test behaviour, etc.). Mediating variables are inferred from phenomenological self-reports and from behavioural observations. There are three kinds of mediating variables, namely structural, content and motivational. Reaction variable consistency does not imply mediating variable consistency and vice-versa. Mediating variables (e.g., traits, motives) help us to explain, understand and predict the processes whereby both concurrent stimuli and stored information are selected.

Structural variables include abilities, competence, cognitive complexity, intelligence, and schemas. Structural variables are not affected by situational factors, within the normal range of situational conditions. Content variables are exemplified by situationally determined and stored information, e.g., the content of anxiety-arousing situations. Situational factors influence and modify the content of the mediating process. Motivational variables include attitudes, drives, motives and needs. Situational and stored contents evoke various motivational factors, and these are influenced and modified by situational factors.

The issue of persons versus situations as the major determinants of behaviour is a pseudo-issue. Behaviour is obviously a function of the continuous interaction of person by situation variables.

The major issue in personality research refers to situational specificity versus trans-situational consistency. That is, is behaviour situation-specific or is it consistent across situations? There are at least three different meanings of "consistency" at the reaction variable level, namely absolute consistency, relative consistency, and coherence. Absolute consistency assumes that an individual manifests a behavioural

trait (e.g., anxiousness) to the same degree in various situations. Today, no one adheres to this viewpoint. Relative consistency assumes that the rank order of individuals for a specific behaviour (e.g., anxious behaviour) is stable across situations for a group of persons. Most of the controversy has arisen with this meaning of consistency, and most of the relevant research on personality traits has focused on this meaning of consistency. Coherence assumes that behaviour is predictable and lawful without necessarily being stable in either absolute or relative terms. The person's pattern of stable and changing behaviour across a wide variety of situations is characteristic for that person (see Block, 1977, Endler, 1982; Magnusson and Endler 1977).

Three major empirical methods have been used to examine the issue of situational specificity versus cross-situational consistency, namely: (1) the multidimensional variance components strategy; (2) the correlational research strategy; and (3) the personality by treatment analysis of variance experimental design. For extensive reviews of the relevant empirical research the reader is referred to Argyle and Little (1972); Block (1977); Bowers (1973); Endler (1973, 1977, 1982, 1983); Endler and Magnusson (1976); Magnusson (1976); and Mischel (1968, 1969). On the basis of the numerous studies using varying methodolgies we can draw the following conclusions: 1. There is little evidence for cross-situational consistency for personality and social variables; 2. There is some evidence for cross-situational consistency for structural variables; (e.g., intelligence, abilities); 3. There is some evidence for cross-situational consistency across similar situations, but little evidence for consistency across dissimilar situations; 4. There is some evidence for longitudinal consistency, for the same persons at different stages of development.

It is important to distinguish between mechanistic (structural) and dynamic (process) interaction. The mechanistic model of interaction is concerned with interactions of main factors such as individuals, situations and modes of response within a data matrix. This model makes a clear distinction between independent and dependent variables, and is concerned with the interaction of two independent variables in determining a dependent variable (behaviour) (see Endler 1981a; Endler and Edwards, 1978). For example, this model is concerned with how persons and situations intereact in determining behaviour.

The dynamic model of interaction is concerned with the reciprocal interaction between behaviour and both situational events and person factors. This model is concerned with the relationship between independent and dependent variables; with reciprocal causation. Situations affect and are affected by person factors and behaviour; similarly, persons affect situations and behaviour and are affected by them. Dynamic interaction is multidirectional.

The person by treatment research strategy and the variance components research strategy represent the mechanistic model. Therefore they are inadequate for assessing the dynamic interaction process, within the context of the interaction model of personality.

The Role of Situations in Interactional Psychology

Prior to presenting the interaction model of anxiety it is necessary to discuss the role of situations, since they interact with persons in determining behaviour. One of the major tasks for an interactional psychology is the description, classification and systematic analyses of stimuli, situations, and environments. At a crude level it is possible to distinguish among environments, situations, and stimuli. "The environment is the general and persistent background or context within which behaviour occurs; whereas the situation is the momentary or transient background. Stimuli can be construed as being the elements within a situation (Endler, 1981b, p. 364)". Furthermore, it is possible to compare elements within a situation and determine how this affects behaviour, or one can make a comparison between situations, assessing the effects of situations as wholes on behaviour.

One important issue is whether we can define the situation independently of the perceiver. Should we emphasize the objective or the subjective characteristics of situations? Because the meaning or significance of a situation appears to be an important determinant of behaviour, we can emphasize the perception of situations when we are discussing person by situation interactions. This implies that we focus on how persons construe the situations they select (or have imposed on them) and with which they interact (Endler, 1981b). Persons react to situations. However, they also affect the situations with which they interact.

We frequently select the situations or stimuli we encounter, and the situations with which we interact in our daily lives. Nevertheless, there are times when situations are imposed on us. This is a continuous and lifelong process. However, we are prone to observe and examine a cross-sectional segment of situations rather than observing situations longitudinally. This creates a bias in that we may not obtain a representative sample of ongoing situations.

Our situational context has a multifaceted effect on us. If we live in a rural area we are more likely to encounter farm animals, wide open spaces and unpolluted air. If we live in the city we are more likely to encounter tall buildings, dense populations, subways and pollution. Where we live also determines the persons with whom we interact. We often select or shop for situations that are rewarding and avoid situations that are painful. Consistency in behaviour, when it exists, may be largely due to the fact that we experience similar situations, both at work and at play from day to day. Our daily routines are frequently very similar from one day to the next. There is a continuous interplay between persons and situations.

There are a number of strategies that are useful in investigating situations (see Ekehammar, 1974). Among the strategies that Ekehammar (1974) discusses, two are especially useful in psychological research, namely, situation perception and situation reaction studies. Situation reaction studies investigate persons' responses to situations. Many of the studies of reactions to situations have used data from

inventories originally designed for research purposes. Endler, Hunt and Rosenstein (1962) factor analyzed the reactions to situations for their S-R Inventory of Anxiousness and found three situational factors, namely, interpersonal threat, inanimate physical danger, and ambiguous. Magnusson (1971, 1974) using a psychophysical method has investigated the perception of situations.

Magnusson and Ekehammar (1975, 1978) and Ekehammar, Schalling and Magnusson (1975) have investigated the relationship between perceptions of situations and reactions to situations, for the same groups of subjects. They found that the coefficient of congruence between perceptions and reactions for three of four a priori groups of situations ranged from .89 to .92. For the fourth group of situations the coefficient of congruence was .69. It is important to distinguish between perceptions and reactions because there is not necessarily a one to one relationship between the two.

The Interaction Model of Personality

As indicated earlier the interaction model of personality has four basic assumptions, namely: 1. Behaviour is a function of a continuous process or multidirectional interaction of persons, situations and behaviour; 2. The person is an active and intentional agent in this process; 3. On the person side cognitions or perceptions are important determinants of behaviour; and 4. The meaning or perception of the situation is the important aspect of the situation. The interaction model of anxiety is derived from the interaction model of personality.

The Interaction Model of Anxiety

Despite its limitations, in that empirically the interaction model of anxiety has emphasized the mechanistic model of interaction, it has made important contributions for our understanding of personality, in general, and anxiety, in particular.

Anxiety involves unpleasant subjective experiences (e.g., terror, fright, panic, trepidation) and manifest bodily disturbances, and has been defined in a number of different ways. Spielberger (1966) has noted that much of the conceptual and empirical confusion about anxiety is due to a failure to distinguish between trait anxiety (A-trait) and state anxiety (A-state).

Spielberger (1972) has defined A-state as an emotional reaction "consisting of unpleasant, consciously-perceived feelings of tension and apprehension with associated activation or arousal of the autonomic nervous system" (p. 29). A-trait has been defined as a measure of "anxiety-proneness--differences between individuals in the probability that anxiety states will be manifested under circumstances involving varying degrees of stress" (Spielberger, 1966, p. 15). A-trait is a person variable and is a potential for manifesting A-state, a transitory arousal. According to the state-trait model of anxiety both person and situation variables are needed to induce A-state. The State-Trait

Anxiety Inventory (STAI), developed by Spielberger, Gorsuch and Lushene (1970) assesses A-state and A-trait, with the A-trait measure emphasizing ego-threat.

The Multidimensionality of Anxiety

The multidimensional interaction model of anxiety (Endler, 1975b, 1980) takes into account the multidimensionality of A-state and A-trait. Endler et al. (1962), in their factor analyses of the situations of the S-R Inventory of Anxiousness, found three factors: interpersonal threat, physical danger and ambiguous. Endler and Okada (1975) developed the S-R Inventory of General Trait Anxiousness (S-R GTA), which measures the above three facets of A-trait, plus a daily routines or innocuous facet. A fifth facet, namely social evaluation, was recently added (Endler, 1980). The S-R GTA was developed with the aim of maximizing the effects of individual differences and minimizing the effects of situations.

Endler's multidimensional interaction model of anxiety

The first basic assumption of the interaction model of anxiety is that both A-trait and A-state are multidimensional. The second assumption is with respect to explicit predictions regarding person by situation interactions in eliciting A-state. In order for a person (facet of A-trait) by situation (stress condition) interaction to be effective in producing A-state changes, it is necessary for the threatening situation to be congruent to the facet of A-trait being examined. For example, social evaluation A-trait would be expected to interact with a social evaluation situation (e.g., an examination) in inducing A-state changes, but not to interact with a physical danger or an ambiguous situation.

Elsewhere (Endler, 1983) I have reviewed 18 field and laboratory studies that have provided empirical support for the multidimensional interaction model of anxiety. Here I wish to review four types of studies that have potential applications, namely studies on classroom examinations, on surgery, on athletic competition and on psychotherapy. These are four types of real life situations.

Exam Studies. Endler and Magnusson (1977) investigated the interaction model of anxiety in a real-life classroom examination situation. Forty-two males and 14 female Swedish college students took the Endler and Okada (1975) S-R GTA prior to an important psychology examination and A-state was assessed by the self-report Behavioural Reactions Questionnaire (BRQ) (Hoy and Endler, 1969; Endler and Okada, 1975) and by pulse rate, just prior to the examination (stress, trial 1) and again two weeks later (non-stress, trial 2). Extreme A-trait groups were selected (12 males, 34 females), that is, subjects were classified as high or low on interpersonal A-trait. The interaction between interpersonal A-trait and the examination situation was significant for pulse rate ($p < .01$) and approached significance ($p < .086$) for the BRQ measure. Endler, King, Kuczynski and Edwards (1980), using Canadian high school students, and Phillips and Endler (1982) using Canadian college students found significant interactions between

a classroom real-life examination and the congruent facet of A-trait (interpersonal or social evaluation) in eliciting A-state changes.

Athletics. Flood and Endler (1980) investigated the interaction model of anxiety in a real-life track meet, an athletic competition situation. Male athletes competing in long, middle and short distance track events were administered the BRQ measure of A-state and the S-R GTA measure of A-trait, two weeks prior to an important track meet. They then took the BRQ again just prior to an important and stressful track meet. The interaction between the track meet (social evaluation situation) and social evaluation A-trait was significant in eliciting A-state. Endler, King and Herring (1982) assessed male and female adults in a karate competition situation, which was perceived as both a social evaluation situation and a physical danger situation. The Present Affect Reactions Questionnaire (PARQ) (Endler, 1980) was used as the measure of A-state. They found significant interactions between the karate competition situation and the social evaluation and physical danger facets of A-trait in eliciting A-state (PARQ) arousal.

Surgery. King and Endler (1982) studied adult women who were required to have either a dilation and curettage (D and C) or a laparoscopy. They found significant interactions between the medical intervention procedure situation and the ambiguous, physical danger and social evaluation facets of A-trait, with respect to A-state. Ackerman and Endler (1982) investigated male and female adults who were required to undergo gum surgery. The situation was perceived as ambiguous and physically dangerous. Nevertheless, the only interaction they obtained was between the dental situation and the social evaluation facet of A-trait in eliciting A-state (PARQ).

Psychotherapy. Endler, Edwards and Kowalchuk (1982) studied the interaction model of anxiety in a real life psychotherapy situation. Male and female patients were used. Congruent with the interaction model of anxiety, significant psychotherapy stress situation by trait anxiety interactions were found for the interpersonal, innocuous and social evaluation facets of A-trait.

Implications

The above studies lend support to the multidimensional interaction model of anxiety. It should be noted that all of the studies discussed involved real life situations. What specific practical implications do the various studies of the interaction model of anxiety have? The implications are limited in that the studies only deal with part of the process. The studies have focused on the antecedents of anxiety and enable us to identify those persons whose A-state changes most rapidly. These studies were not concerned with the consequences of anxiety for classroom examination performance, for athletic performance, for tolerating surgery or for alleviating anxiety during psychotherapy. However, by knowing which persons are most anxious we can focus on them or by cognitive behaviour modification techniques or behaviour therapy we may be able to reduce their anxiety. By studying perceptions of situations we can determine which situations are most threatening and perhaps have persons avoid or reconceptualize these situations.

In general, it is important to understand the perceptions of situations and the nature of person by situation interactions. It is also important to understand under what conditions anxiety is increased and under what conditions it is decreased. The interaction model of anxiety can assist us in these endeavours.

References

Ackerman, C., & Endler, N. S. The interaction model of anxiety empirically examined in a dental treatment situation. York University, unpublished manuscript, 1982.

Argyle, M., & Little, B. R. Do personality traits apply to social behavior? Journal of Theory and Social Behavior, 1972, 2, 1-35.

Bandura, A. (Ed.). Psychological modeling: Conflicting theories. New York: Aldine-Atherton, 1971.

Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 1977, 84, 191-215, (a).

Bandura, A. Social learning theory. Englewood Cliffs, N. J.: Prentice-Hall, 1977, (b).

Block, J. Advancing the psychology of personality: Paradigmatic shift or improving the quality of research. In D. Magnusson and N. S. Endler (Eds.), Personality at the crossroads: Current issues in interactional psychology. Hillsdale, N. J.: Lawrence Erlbaum Associates, 1977.

Bowers, K. S. Situationism in psychology: An analysis and a critique. Psychological Review, 1973, 80, 307-336.

Cattell, R. B. Personality and motivation structure and measurement. Yonkers-on-Hudson, N. Y.: World Book, 1957.

Dollard, J., & Miller, N. E. Personality and psychotherapy: An analysis in terms of learning, thinking and culture. New York: McGraw-Hill, 1950.

Ekehammar, B. Interactionism in personality from a historical perspective. Psychological Bulletin, 1974, 81 1026-1048.

Ekehammar, B., Schalling, D., & Magnusson, D. Dimensions of stressful situations: A comparison between a response analytical and a stimulus analytical approach. Multivariate Behavioral Research, 1975, 10, 155-164.

Endler, N. S. The person versus the situation--A pseudo issue? A response to Alker. Journal of Personality, 1973, 41, 287-303.

Endler, N. S. The case for person-situation interactions. Canadian Psychological Review, 1975, 16 12-21, (a).

Endler, N. S. A person-situation interaction model of anxiety. In C. D. Spielberger & I. G. Sarason (Eds.), Stress and anxiety (Vol. 1). Washington, D. C.: Hemisphere Publishing Corporation (Wiley), 1975, (b).

Endler, N. S. The role of person by situation interactions in personality theory. In I. C. Uzgiris & F. Weizmann (Eds.), The structuring of experience. New York: Plenum Press, 1977.

Endler, N. S. Person-situation interaction and anxiety. In I. L. Kutash & L. B. Schlesinger (Eds.), Handbook on stress and anxiety: Contemporary knowledge, theory and treatment. San Francisco, California: Josey-Bass Publishers, 1980.

Endler, N. S. Persons, situations and their interactions. In A. I. Rabin (Ed.), Further explorations in personality. New York: John Wiley & Sons, 1981, (a).

Endler, N. S. Situational aspects of interactional psychology. In D. Magnusson (Ed.), Toward a psychology of situations: An interactional perspective. Hillsdale, N. J.: Lawrence Erlbaum Associates, 1981, (b).

Endler, N. S. Interactionism comes of age. In M. P. Zanna, E. T. Higgins, & C. P. Herman (Eds.), Consistency in social behavior: The Ontario Symposium (Vol. 2). Hillsdale, N. J.: Lawrence Erlbaum Associates, 1982.

Endler, N. S. Interactionism: A personality model but not yet a theory. In M. M. Page & R. Dienstbier (Eds.), Nebraska Symposium on Motivation: Personality - Current Theory and Research. Lincoln, Nebraska: University of Nebraska Press, 1983, (in press).

Endler, N. S., & Edwards, J. M. Person by treatment interactions in personality research. In L. A. Pervin & M. Lewis (Eds.), Perspectives in interactional psychology. New York: Plenum Press, 1978.

Endler, N. S., Edwards, J. M., & Kowalchuk, B. The interaction model of anxiety assessed in a psychotherapy situation. York University, unpublished manuscript, 1982.

Endler, N. S., Hunt, J. McV., & Rosenstein, A. J. An S-R Inventory of Anxiousness. Psychological Monographs, 1962, 76, No. 17 (Whole No. 536), 133.

Endler, N. S., King, P. R., & Herring, C. The interaction model of anxiety examined in an athletic karate competition situation. York University, unpublished manuscript, 1982.

Endler, N. S., King, P. R., Kuczynski, M., & Edwards, J. M. Examination induced anxiety: An empirical test of the interaction model. Department of Psychology Reports, York University, 1980, No. 97.

Endler, N. S., & Magnusson, D. Toward an interactional psychology of personality. Psychological Bulletin, 1976, 83, 956-974.

Endler, N. S., & Magnusson, D. The interaction model of anxiety: An empirical test in an examination situation. Canadian Journal of Behavioural Science, 1977, 9, 101-107.

Endler, N. S., & Okada, M. A multidimensional measure of trait anxiety: The S-R Inventory of General Trait Anxiousness. Journal of Consulting and Clinical Psychology, 1975, 43 319-329.

Erikson, E. Childhood and society (2nd Ed.). New York: Norton, 1963.

Flood, M., & Endler, N. S. The interaction model of anxiety: An empirical test in an athletic competition situation. Journal of Research in Personality, 1980, 14, 329-339.

Freud, S. Collected papers (Vols. I-V). New York: Basic Books, 1959.

Fromm, E. The sane society. New York: Rinehart, 1955.

Guilford, J. P. Personality. New York: McGraw-Hill, 1959.

Horney, Karen. Our inner conflicts. New York: W. W. Norton, 1945.

Hoy, Elizabeth, & Endler, N. S. Reported anxiousness and two types of stimulus incongruity. Canadian Journal of Behavioural Science, 1969, 1, 207-214.

King, P. R., & Endler, N. S. Medical intervention and the interaction model of anxiety. Canadian Journal of Behavioural Science, 1982, in press.

Magnusson, D. An analysis of situational dimensions. Perceptual and Motor Skills, 1971, 32, 851-867.

Magnusson, D. The individual in the situation: Some studies on individuals' perception of situations. Studia Psychologica, 1974, 16, 124-132.

Magnusson, D. The person and the situation in an interactional model of behavior. Scandinavian Journal of Psychology, 1976, 17, 253-271.

Magnusson, D., & Ekehammar, B. Perceptions of and reactions to stressful situations. Journal of Personality and Social Psychology, 1975, 31, 1147-1154.

Magnusson, D., & Ekehammar, B. Similar situations--similar behaviors? Journal of Research in Personality, 1978, 12, 41-48.

Magnusson, D., & Endler, N. S. Interactional psychology: Present status and future prospects. In D. Magnusson & N. S. Endler (Eds.), Personality at the crossroads: Current issues in interactional psychology. Hillsdale, N. J.: Lawrence Erlbaum Associates, 1977.

Mischel, W. Personality and assessment. New York: Wiley, 1968.

Mischel, W. Continuity and change in personality. American Psychologist, 1969, 24, 1012-1018.

Mischel, W. Toward a cognitive social learning reconceptualization of personality. Psychological Review, 1973, 80, 252-283.

Phillips, J. B., & Endler, N. S. Academic examinations and anxiety: The interaction model empirically tested. Journal of Research in Personality, 1982, in press.

Rotter, J. B. Some problems and misconceptions related to the construct of internal versus external control of reinforcement. Journal of Consulting and Clinical Psychology, 1975, 43, 56-67.

Spielberger, C. D. Theory and research on anxiety. In C. D. Spielberger (Ed.), Anxiety and behavior. New York: Academic Press, 1966.

Spielberger, C. D. Anxiety as an emotional state. In C. D. Spielberger (Ed.), Anxiety: Current trends in theory and research (Vol. 1). New York: Academic Press, 1972.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. Manual for the State-Trait Anxiety Inventory. Palo Alto, California: Consulting Psychologist Press, 1970.

Sullivan, H. S. The interpersonal theory of psychiatry. New York: Norton, 1953.